

NIOSH Study Spans over Thirty Years of Hearing Loss Trends



A new study from the National Institute for Occupational Safety and Health (NIOSH) examines thirty years of hearing loss trends experienced by workers exposed to noise while on the job, across various industries. The study, published by the American Journal of Industrial Medicine, found that while progress has been made in reducing the risk of hearing loss within most industry sectors, additional efforts are needed within the Mining, Construction, and Healthcare and Social Assistance sectors.

Approximately 22 million U.S. workers are exposed to hazardous noise at work. Long-term exposure to hazardous noise, a single instantaneous high noise exposure, or exposure to chemicals that damage hearing (ototoxic chemicals) can cause occupational hearing loss – a job-related illness that is permanent and potentially debilitating, but entirely preventable. This study is the first to look at thirty years of hearing loss trends by industry sector and give a birds-eye view of how workers are affected by hazardous noise environments.

“Looking at hearing loss trends across all industries over a long period of time can provide a better understanding of what still needs to be done for the protection of workers,” said NIOSH Director John Howard, M.D. “Noise control in the workplace is directly linked to the prevention of hearing loss among workers in all industries and can positively impact workers on the job and at home.”

In this study, NIOSH researchers examined audiograms - results from hearing tests for almost 2 million noise-exposed workers from 1981-2010. Some of the key findings are as follows:

- The overall prevalence of hearing loss for workers in all industries remained consistent at 20% over the entire thirty-year period. The prevalence is the total number of workers who have hearing loss (existing and new cases) and illustrates the burden of the illness.

- The incidence and risk of incident hearing loss decreased over time, indicating some progress in occupational hearing loss prevention efforts over 30 years. The incidence is the number of new cases of hearing loss.
- The Construction sector had the highest incidence of hearing loss during most time periods.
- Risks of incident hearing loss were significantly lower during 2006-2010 for every industry sector except Mining, and Healthcare and Social Assistance.

Other factors may have contributed to the improvement in incidence and risk, including the overall reduction in smoking, which is a risk factor for hearing loss, and better treatment of middle ear disorders.

The findings in the Mining, Construction and Healthcare and Social Assistance sectors are also supported by other research. The Mining sector has a higher percentage of noise-exposed workers than any other U.S. industry. The Construction sector has less stringent hearing conservation requirements than most industries, and the mobile, seasonal nature of construction work and large proportion of independent contractors contribute to the difficulty in implementing hearing conservation practices. While only 4% of workers are exposed to hazardous noise in the Healthcare and Social Assistance sector, 74% of these workers have reported not wearing their hearing protection. Efforts to reduce both the burden and risk of hearing loss are still needed. There is no industry where workers can be considered 'safe' from hearing loss.

The study, *Trends in Worker Hearing Loss by Industry Sector, 1981–2010*, can be found at: <http://onlinelibrary.wiley.com/doi/10.1002/ajim.22429/abstract>. For more information about hearing loss prevention, please visit: <http://www.cdc.gov/niosh/topics/noise/>. To learn more about occupational hearing loss surveillance, please visit: <http://www.cdc.gov/niosh/topics/ohl/>.

NIOSH is the federal agency that conducts research and makes recommendations for preventing work-related injuries, illnesses, and deaths. For more information about NIOSH visit <http://www.cdc.gov/niosh/>.



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